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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,722	09/06/2001	Stefan Grosse	10191/1728	9967
26646	7590	03/10/2004	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			MEEKS, TIMOTHY HOWARD	
			ART UNIT	PAPER NUMBER
			1762	
DATE MAILED: 03/10/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/831,722

Applicant(s)

GROSSE ET AL.

Examiner

Timothy H. Meeks

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 23-45 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/28/02.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

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## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 112***

Claims 27 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 27, line 1, the term "at least one structure" is confusing. If applicants intend the previously recited guide structure, it is suggested that applicants amend this phrase to "at least one guide structure".

In claim 39, line 1, the phrase "at least one of the supplied gas" is confusing because supplying of only one gas was described in claim 37.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 23-31, 33, 34, 37-39, 44, and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishimae et al. (4,890,294).

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Nishimae discloses a device for producing plasmas for plasma processing, producing light (col. 16, lines 60-65) and a method using said device the device comprising a microwave generator coupled to a waveguide structure through a launching structure wherein microwaves are generated in the microwave generator, launched into the waveguide through the launch structure and a gas passed in the guide structure to form a plasma discharge (Figures 6 and 7 col. 7, line 34-col. 8, line 30). Waveguides as described in the dependent claims are described in the embodiments mentioned at col. 9, lines 25-60 and figures 10 and 11, col. 10, lines 1-15, col. 11, lines 42-47 and 58-65, col. 15, lines 50-68 and figure 20, col. 22, lines 35-68.

Claims 23, 29-31, 37-39, 42, and 45 are rejected under 35 U.S.C. 102(e) as being anticipated by Moison et al. (6,224,836).

Moison discloses a device for producing plasmas for cleaning exhaust gases and a method using said device the device comprising a microwave generator coupled to a waveguide structure through a launching structure wherein microwaves are generated in the microwave generator, launched into the waveguide through the launch structure and a gas comprising hydrocarbons for treatment passed through the guide structure to form a plasma discharge (figure 6, col. 4, lines 8-60, col. 5, lines 3-25, col. 6, lines 60-68, col. 7, lines 1-20).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 32, 35, 40, and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimae et al. (4,890,294).

Nishimae is silent as to the size of the holes in the waveguide described at col. 22. However, because Nishimae discloses that the size of the holes affects the energy distribution, it would have been obvious to have adjusted the size of the holes to sizes in the claimed range through routine experimentation to optimize the energy distribution.

Nishimae is silent as to the spacing between the conductive walls (metal plates) described at col. 15. However, because this spacing clearly affects the size of the discharge gap and hence the plasma or laser size, it would have been obvious to adjust this spacing to values in the claimed range through routine experimentation so as to optimize the size of the plasma.

Nishimae is silent as to the pressure or power at which the plasma is formed, however, because the pressure at which the gas is provided would affect the power need to form a stable plasma, it would have been obvious to have adjusted these result effective parameters through routine experimentation so as to optimize the stability of the plasma.

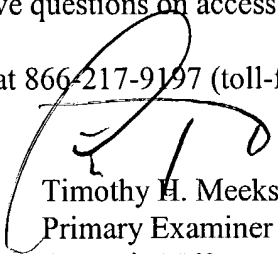
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Nishimae describes use of the plasma in plasma processing which typically uses gaseous or vaporous precursors or for producing light, which typically uses inert gases, hence it would have been obvious to have used these gases at the claimed flow rates to accomplish these applications described by Nishimae.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy H. Meeks whose telephone number is 571-272-1423. The examiner can normally be reached on Mon., Tues., Thurs.(6-6:30), Fri.(6:30-10:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on 571-272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Timothy H. Meeks  
Primary Examiner  
Art Unit 1762